

ABSTRACT OF THE DISCLOSURE

A wavemeter for a high repetition rate gas discharge laser having an output laser beam comprising a pulsed output of greater than or equal to 15 mJ per pulse, sub-nanometer bandwidth tuning range pulses having a femptometer bandwidth precision and tens of femptometers bandwidth accuracy range, for measuring bandwidth on a pulse to pulse basis at pulse repetition rates of 4000Hz and above, is disclosed which may comprise an adjustable optic mounting containing an optic element having an assigned vertical optical plane in the wavemeter optical layout and comprising: a mounting dowel pin positioned on a platform holding the components of the wavemeter; a dowel receiving opening on the adjustable mirror mounting a tangent to which is in the assigned vertical optical plane. The adjustable optic mounting may contain a tilt mechanism incorporated into the adjustable optic mounting enabling tilting the optic element about an axis in a plane parallel to a platform holding components of the wavemeter. The mounting may also have an optic receiving recess indexed to the size of the optic element. The optic element may be retained by at least one spring clip and may be a flat rectangular mirror or a circular optic, e.g., a mirror or a lens. The mounting may also have an optic mounting frame containing an optical element; a slit assembly containing a microslit adapted to selectively pass a slit of the optical output of the optical diffusion element to a succeeding optical element, moveably mounted to the optic mounting frame; a microslit position adjustment mechanism moving the slit assembly from a retracted position exposing the optic diffusion element for purposes of alignment to a down position with the slit aligned and moving the microslit into alignment.